MANEY HILL PRIMARY SCHOOL

MATHEMATICS POLICY

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MATHEMATICS POLICY

Introduction

This policy document is a statement of the aims, principles and strategies for the teaching and learning of Mathematics at Maney Hill Primary School. The National Curriculum for Mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our Calculations Policy, this ensures continuity, progression and high expectations for attainment in mathematics.

Rationale

Mathematics is a body of knowledge which provides a way of viewing and making sense of the world. Mathematics is used to analyse and communicate information and ideas, and to tackle a range of real life problems. It provides an opportunity to experience the accuracy of calculation and measurement, and the logic of problem solving.

Aims

- To develop fluency in the fundamentals of mathematics
- To develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- To reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- To develop a deeper understanding of mathematics through a process of enquiry and investigation
- To develop the ability to apply knowledge, skills and ideas in real life contexts and to become aware of the uses of mathematics in the wider world
- To develop personal qualities such as perseverance, independent thinking, cooperation and self-confidence through a sense of achievement and success
- To develop mathematics through a cross-curricular approach, in particular with Computing and Science
- To foster a positive attitude and enthusiasm

Curriculum Framework

The fundamental skills, knowledge and concepts of the subject are set out in the National Curriculum 2014.

Key Stage One

- Number and place value
- Addition and Subtraction
- Multiplication and Division
- Fractions
- Measurement
- Geometry
- Statistics

Lower Key Stage Two

- Number and place value
- Addition and Subtraction
- Multiplication and Division
- Fractions (including decimals)
- Measurement
- Geometry
- Statistics

Upper Key Stage Two

- Number and place value
- Addition and Subtraction
- Multiplication and Division
- Fractions (including decimals and percentages)
- Measurement
- Geometry
- Statistics
- Ratio and Proportion **(Year 6 only)**
- Algebra **(Year 6 only)**

Organisation

There is an equivalent of one hour per day of directed mathematics teaching. In order to achieve higher pupil expectations and standards, a flexible approach to teaching is adopted using a variety of teaching methods.

These methods are:

- Interactive whole class teaching
- Mental maths
- Real-life situations
- Story maths
- Investigations and problem solving
- Active learning

We will pay particular attention to:

- Differentiation – providing a suitable learning experience for all pupils so that they can make the best possible progress within a challenging learning environment
- Continuity and progression – providing links between lessons throughout the school year and between year groups
- Home/school links – encouraging parent/carer understanding of our mathematics curriculum, so that the child's learning (including homework provision) can be supported at home

Curriculum and Planning

Long term planning for each year group is from the National Curriculum 2014 (Years 1–6) and the Early Learning Goals (Reception).

Medium term planning also follows the National Curriculum, with plans highlighting the key objectives for each half term.

Short term planning is recorded on a planning sheet which outlines the specific learning objectives and success criteria to be taught each day, active learning, resources used, main teaching activities, differentiated activities and assessment.

Assessment and target setting

Assessment is an integral part of the teaching and learning of mathematics in our school. We want assessment to be purposeful, and to inform teachers and support staff of what children have learnt. We will aim to share this information with children in class by discussing learning objectives at the beginning and end of the lesson. Details will also be shared with parents in a number of ways, including through parent/teacher consultations and the annual pupil report to parents.

Assessment can take the following forms:

- Daily assessment
- Marking of work
- Structured observation
- Assessment tasks on a particular unit of work
- Pupil assessment
- Non-statutory standardised tests
- Statutory assessments

Targets will be set and reviewed regularly for all children. Targets will be shared with children and parents during parent/teacher consultations.

Baseline Assessment

Reception class pupils are assessed in the Autumn Term on entry to school in basic mathematical knowledge and skills. Reception class pupils are assessed against the Early Learning Goals.

Statutory Assessment Tasks and Tests

Year 2 and Year 6 pupils are involved in statutory assessments for the end of Key Stage 1 (KS1) and Key Stage 2 (KS2). Results of statutory assessment inform our forecasting and target setting practices for individual pupils and for whole school monitoring of standards.

Non Statutory Tasks and Tests

In school progress assessments for year groups 1-6 includes use of:

- Formative teacher assessment – during the lesson and a weekly review
- Summative test assessment – Scaled Score tests for Maths in autumn and summer term

Record keeping and reporting

Annotated weekly planning will be reviewed by the Head Teacher. Assessment results will be collected by the Mathematics Leader and class teachers will analyse results to support future planning. All assessments will be placed on the school tracking system to monitor cohort progress.

Resources

Mathematics is resourced with:

- A central stock of many items (these support teaching of topics such as time weight, measurement and are added to annually)
- Classroom allocations of basic equipment
- Rising Stars Mental Maths books
- Rising Stars Problem Solving and Reasoning books

Special Educational Needs and Disabilities (SEND)

All individuals will be given the opportunity to develop their full potential in Mathematics irrespective of race, gender, religion or ability.

The School has a responsibility under the government's Inclusion Strategy to provide 'effective learning opportunities for all pupils', setting out three principles that are essential to developing a more inclusive curriculum:

- Setting suitable challenges
- Responding to pupil's diverse learning needs
- Overcoming potential barriers to learning and assessment for individuals and groups of pupils

Equal Opportunities

All individuals in school must be valued and be given the opportunity to develop their full potential within a context of mutual respect and support, irrespective of race, gender, religion or disability.

Homework

See the Homework Policy for details.

Role of the Maths Leader

The class teacher is responsible for the organisation of mathematics in his/her class based on the National Curriculum 2014. However, the Maths Leader is responsible for:

- The curriculum audit which covers:
  - the matching of the planning to the National Curriculum
  - the annual report to the Governing Body
  - the annual Action Plan and twice yearly subject evaluation
- Book trawls
- Lesson observations
- Learning walks
- Attending Mathematics courses regarding current issues, and reporting these back to staff
- Organising INSET for teaching and non-teaching staff
- Ordering maths materials/resources linked to the annual maths curriculum budget
- Reviewing new materials.

Monitoring evaluation and review

We plan to monitor this policy through:

- Regular review and moderation of children's work
- Evaluation of KS1 and KS2 SATs results, teacher assessments and other standardised assessments
- Monitoring programme to observe the quality of teaching or how the curriculum is implemented
- Regular review and audit of resources

Active learning

We are using active learning across all subjects. On our Maths planning format we include how active learning will be evident in at least one of our lessons per week. This could be used at any point during the lesson and can use a variety of resources that have been distributed to each classroom.